

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 January 2004 (22.01.2004)

PCT

(10) International Publication Number
WO 2004/008070 A2

(51) International Patent Classification⁷:

G01C

(21) International Application Number:

PCT/IL2003/000584

(22) International Filing Date: 15 July 2003 (15.07.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

150748

16 July 2002 (16.07.2002) IL

(71) Applicant (*for all designated States except US*):
BIOSCAN TECHNOLOGIES LTD. [IL/IL]; P.O.Box
281, 20692 Yokneam (IL).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **COTER, Florin**
[IL/IL]; 9a Baal Shem Tov St., 33742 Haifa (IL).

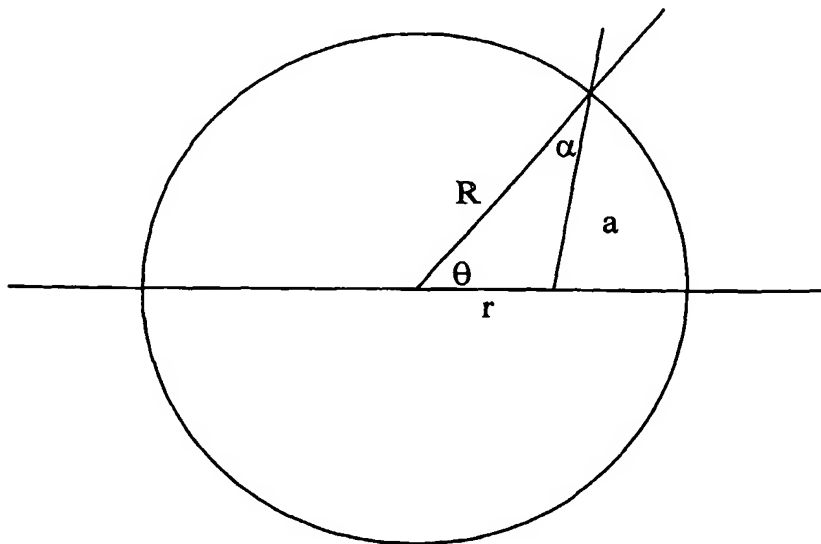
Published:

— *without international search report and to be republished upon receipt of that report*

(74) Agent: **MILLER - SIERADZKI ADVOCATES & PATENT ATTORNEYS**; P.O.Box 6145, 31061 Haifa (IL).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SYSTEM AND METHOD FOR DETERMINING PROPERTIES OF A TUBULAR CAVITY



(57) Abstract: A method for determining the distance of a transceiver located within a lumen from the center of the lumen and for determining the radius of the lumen, the lumen cross-section being substantially circular at the transceiver location, the method applied on data received from a transceiver placed at a position within the lumen that is distance (r) from the center and distance (a) from the lumen wall, transmitting a signal of known velocity (v) that can be correlated with the time of flight and receiving a first signal and a second signal that are reflections of the transmitted signal, timing the time differences between the transmission of the transmitted signal and reception of the first (t1) and second (t2) reflection signals, the method comprising: Calculating the distance of the transceiver from the center of the lumen = (t1 - t2)v/4; and Calculating the radius of the lumen = (t1 + t2)v/4.